

We claim:

1. A vehicle display device which is mounted on a vehicle and displays vehicle information using light emission, comprising:

5           a transparent light guide plate having a first major surface and a second major surface, through which another side can be seen from the first major surface, said light guide plate being in such a position that the first major surface thereof faces a driver in front of a sight line of the driver and that the light guide plate tilts rearward while a light entrance end plane thereof comes at the bottom and a light emission end plane thereof comes at the top;  
10       and

          at least one luminous element placed on the entrance end plane of the light guide plate.

2. The vehicle display device according to claim 1, wherein the emission end plane of the light guide plate includes a plurality of planes having different inclination angles with  
15       reference to front and rear directions.

3. The vehicle display device according to claim 1 wherein the emission end plane of the light guide plate is frosted.

4. The vehicle display device according to claim 1 wherein a groove is formed in the first major surface of the light guide plate in a width direction of the light guide plate to be  
20       perpendicular to a light guide direction.

5. The vehicle display device according to claim 1 wherein a distance from the entrance end plane to the emission end plane of the light guide plate is sufficiently long with

reference to a distance between the first and second major surfaces thereof wherein a direct light beam and a light beam reflected a plurality of times within the light guide plate in a plate width direction are emitted from the emission end plate.

6. The vehicle display device according to claim 1 comprising:

5           a display panel which represents an image by utilizing differences in light transmittance; and

          a projection light source which projects the image on the display panel onto the first major surface of the light guide plate.

7. The vehicle display device of claim 6 wherein the display panel comprises a  
10       liquid crystal panel that represents a dynamically changing image.

8. The vehicle display device of claim 6 wherein the display panel comprises a screen wherein a predetermined stationary image is represented.

9. A light guide plate of a vehicle display device, which guides light to an emission end plane and emits the light, the light being incident from an entrance end plane, wherein  
15       the emission end plane of the light guide plate includes a plurality of planes having different inclination angles.

10. A light guide plate of a vehicle display device, which guides light to an emission end plane and emits the light, the light being incident from an entrance end plane, wherein an emission end plane is frosted.

20       11. A light guide plate of a vehicle display device, which guides light to an emission end plane and emits the light, the light being incident from an entrance end plane, wherein a groove is formed in a first major surface of the light guide plate in a width direction of the

light guide plate to be perpendicular to a light guide direction.

12. The light guide plate of the vehicle display device according to claim 9 wherein a distance from the entrance end plane to the emission end plane of the light guide plate is sufficiently long with reference to a distance between the first and second major surfaces thereof wherein a direct light beam and a light beam reflected a plurality of times within the  
5 light guide plate in a plate width direction are emitted from the emission end plate.